

CLAIMS

1. A document management system, the system comprising:
a physical-document monitoring device comprising:
a document coupling device,
5 a sensor coupled to the document coupling device, the sensor
operable to sense a state of a document and to generate a signal representative thereof,
and
a computer coupled to sensor, the computer operable to determine
a document state based on the signal.
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2. The system of claim 1, wherein the document coupling device is operable
to bind a document.
3. The system of claim 1, wherein the document state comprises the number
15 of document pages.
4. The system of claim 3, wherein the sensor comprises the document
coupling device.
- 20 5. The system of claim 4, wherein the sensor senses the number of pages
based on capacitance.
6. The system of claim 1, wherein the document state comprises an
environmental condition of a document.
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7. The system of claim 6, wherein the environmental condition comprises
illumination.

8. The system of claim 1, further comprising a wireless communication device coupled to the computer, the wireless communication device operable to send data from and receive data for the computer.

5 9. The system of claim 8, wherein the sent data comprises the determined document state.

10. The system of claim 8, wherein the received data comprises state data for a non-physical version of a document.

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11. The system of claim 10, wherein the received data comprises document meta-data.

12. The system of claim 11, wherein the document meta-data is received in
15 the form of a text string.

13. The system of claim 8, wherein the received data comprises a document location.

20 14. The system of claim 8, wherein the received data comprises an allowable document state.

15. The system of claim 14, wherein the allowable document state comprises a rule that expresses the allowable document state.

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16. The system of claim 1, wherein the computer is further operable to determine whether an allowable document state has been violated.

17. The system of claim 1, further comprising a display device operable to
30 provide a visual indication of physical document status.

18. The system of claim 1, further comprising a user input device.

19. The system of claim 18, wherein the computer is further operable to
5 generate a wireless message to signify that activation of the user input device has
occurred.

20. A method for document management at a physical document, the method
comprising:

10 sensing a state of a document;
generating a signal representing the document state;
determining the document state based on the signal; and
generating a wireless signal representing the document state.

15 21. The method of claim 20, further comprising coupling a physical-document
monitoring device to the document.

22. The method of claim 21, wherein coupling comprises binding the
document.

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23. The method of claim 20, wherein the document state comprises the
number of document pages.

24. The method of claim 23, wherein sensing a state of a document comprises
25 sensing an electrical value affected by a dielectric.

25. The method of claim 20, wherein the document state comprises the
location of the document.

26. The method of claim 20, wherein the document state comprises an environmental condition of the document.

27. The method of claim 20, further comprising receiving document meta-
5 data.

28. The method of claim 20, further comprising receiving state data for a non-physical version of a document.

10 29. The method of claim 20, further comprising:
receiving an allowable document state; and
storing the allowable document state.

30. The method of claim 20, further comprising determining whether an
15 allowable document state has been violated.

31. The method of claim 20, further comprising providing a visual indication of physical document status.

20 32. The method of claim 20, further comprising:
detecting activation of a user input device; and
generating a wireless signal to report the activation.

33. An article comprising a machine-readable medium storing instructions
25 operable to cause one or more machines to perform operations comprising:
determining whether a state of a document has been sensed;
determining the document state; and
generating a wireless message representing the document state.

34. The article of claim 33, wherein the document state comprises the number of document pages.

35. The article of claim 34, wherein determining a document state comprises
5 determining an electrical value affected by a dielectric.

36. The article of claim 33, wherein the document state comprises the location of the document.

10 37. The article of claim 33, wherein the document state comprises an environmental condition of the document.

38. The article of claim 33, wherein the instructions are further operable to cause one or more machines to perform operations comprising determining whether
15 document meta-data has been received.

39. The article of claim 33, wherein the instructions are further operable to cause one or more machines to perform operations comprising determining whether state data for a non-physical version of a document has been received.

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40. The article of claim 33, wherein the instructions are further operable to cause one or more machines to perform operations comprising:
determining whether an allowable document state has been received; and
storing the allowable document state.

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41. The article of claim 33, wherein the instructions are further operable to cause one or more machines to perform operations comprising determining whether an allowable document state has been violated.

42. The article of claim 33, wherein the instructions are further operable to cause one or more machines to perform operations comprising determining a visual indication of physical document status.

5 43. The article claim 33, wherein the instructions are further operable to cause one or more machines to perform operations comprising:
 determining whether activation of a user input device has occurred; and
 generating a wireless message to report the activation.

10 44. A document management system, the system comprising:
 a document tracking device, the document tracking device operable to:
 store non-physical versions of documents and state data for
 physical versions of documents, and
 manage access to the non-physical document versions and the state
15 data.

 45. The system of claim 44, wherein the state data comprises the number of pages of a physical version.

20 46. The system of claim 44, wherein the state data comprises the location of a physical version.

 47. The system of claim 44, wherein the state data comprises an environmental condition of a physical version.

25 48. The system of claim 44, wherein the document tracking device is further operable to:
 determine whether a physical version state has been received; and
 if a physical state has been received, update the state data.

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49. The system of claim 44, wherein the one or more memory locations are further operable to store state data for the non-physical versions.

50. The system of claim 49, wherein the document tracking device is further
5 operable to:

determine whether a state change has occurred to a non-physical version of a document;

determine whether the non-physical version has an associated physical-document monitoring device; and

10 if the physical version has an associated physical-document monitoring device, initiate a message representing the state change.

51. The system of claim 44, wherein the one or more memory locations are further operable to store meta-data for the documents.

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52. The system of claim 44, wherein the document tracking device is further operable to:

receive a physical document registration request;

determine if an associated non-physical document exists; and

20 associate the non-physical version with a physical-document monitoring device.

53. The system of claim 44, wherein the one or more memory locations are further operable to store allowable states for the physical versions.

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54. The system of claim 53, wherein the document tracking device is further operable to:

determine whether a message regarding an allowable state of a physical version has been received; and

30 if the message has been received, store the allowable state.

55. The system of claim 53, wherein the document tracking device is further operable to generate a message for a physical-document monitoring device regarding an allowable state for a physical version.

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56. The system of claim 53, wherein the states are expressed in the form of rules.

57. The system of claim 53, wherein the document tracking device is further operable to determine whether a message indicating that an allowable state has been violated has been received.

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58. The system of claim 53, wherein the document tracking device is further operable to determine whether an allowable state has been violated based on a received state.

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59. The system of claim 44, wherein the document tracking device comprises:
memory to store the non-physical versions of documents and the state data for physical versions of documents;
a document management engine to manage access to the non-physical versions of documents; and
mediators to manage access to the state data of the physical versions of documents.

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60. The system of claim 44, wherein the document tracking device is further operable to:
receive a signal indicating that an input device of a physical-document monitoring device has been activated; and
alter the editing rights of an electronic version of the associated document.

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5 61. A method for document management, the method comprising:
 storing non-physical versions of documents;
 receiving state data for physical versions of the documents;
 associating the state data with the appropriate non-physical versions; and
 managing access to the non-physical versions and the state data.

 62. The method of claim 61, wherein the state data comprises the number of
pages of a physical version.

10 63. The method of claim 61, wherein the state data comprises the location of a
physical version.

 64. The method of claim 61, wherein the state data comprises an
environmental condition of a physical version.

15 65. The method of claim 61, further comprising storing state data for the non-
physical versions of the documents.

 66. The method of claim 65, further comprising:
20 determining whether a state change has occurred to a non-physical version
of a document;
 determining whether the non-physical version has an associated physical-
document monitoring device; and
 if the non-physical version has an associated physical-document
25 monitoring device, initiating a message representing the state change.

 67. The method of claim 61, further comprising:
 receiving a physical document registration request;
 determining if an associated non-physical document exists; and

associating the non-physical version with a physical-document monitoring device.

68. The method of claim 61, further comprising storing allowable states for physical versions of the documents.

69. The method of claim 68, further comprising receiving a message regarding a physical version allowable state.

70. The method of claim 68, further comprising generating a message for a physical-document monitoring device regarding an allowable state for a physical version of a document.

71. The method of claim 68, further comprising:
determining whether a message indicating that an allowable state has been violated has been received; and
if such a message has been received, associating the message with a non-physical version and storing a notification of the violation.

72. The method of claim 68, further comprising determining whether an allowable state has been violated based on a received state.

73. The method of claim 61, further comprising:
receiving a signal indicating that an input device of a physical-document monitoring device has been activated; and
altering the editing rights of an electronic version of the associated document.

74. An article comprising a machine-readable medium storing instructions operable to cause one or more machines to perform operations comprising:

storing non-physical versions of documents;
determining whether state data for physical versions of the documents has
been received;

5 associating the state data with the appropriate non-physical versions; and
managing access to the non-physical versions and the state data.

75. The article of claim 74, wherein the state data comprises the number of
pages of a physical version.

10 76. The article of claim 74, wherein the state data comprises the location of a
physical version.

77. The article of claim 74, wherein the state data comprises an environmental
condition of a physical version.

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78. The article of claim 74, wherein the instructions are further operable to
cause machines to perform operations comprising storing state data for the non-physical
versions of the documents.

20 79. The article of claim 78, wherein the instructions are further operable to
cause machines to perform operations comprising:

determining whether a state change has occurred to a non-physical version
of a document;

25 determining whether the non-physical version has an associated physical-
document monitoring device; and

if the non-physical version has an associated physical-document
monitoring device, initiating a message representing the state change.

30 80. The article of claim 74, wherein the instructions are further operable to
cause machines to perform operations comprising:

determining whether a physical document registration request has been received;

determining if an associated non-physical document exists; and

if an associated non-physical version exists, associating the non-physical
5 version with a physical-document monitoring device.

81. The article of claim 74, wherein the instructions are further operable to cause machines to perform operations comprising storing allowable states for physical versions of the documents.

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82. The article of claim 81, wherein the instructions are further operable to cause machines to perform operations comprising determining whether a message regarding a physical version allowable state has been received.

15 83. The article of claim 81, wherein the instructions are further operable to cause machines to perform operations comprising generating a message for a physical-document monitoring device regarding an allowable state for a physical version of a document.

20 84. The article of claim 81, wherein the instructions are further operable to cause machines to perform operations comprising:
determining whether a message indicating that an allowable state has been violated has been received; and
if such a message has been received, associating the message with a non-
25 physical version and storing a notification of the violation.

85. The article of claim 81, wherein the instructions are further operable to cause machines to perform operations comprising determining whether an allowable state has been violated based on a received state.

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86. The article of claim 74, wherein the instructions are further operable to cause machines to perform operations comprising:

determining whether a signal indicating activation of an input device of a physical-document monitoring device has been received; and

5 altering the editing rights of an electronic version of the associated document.